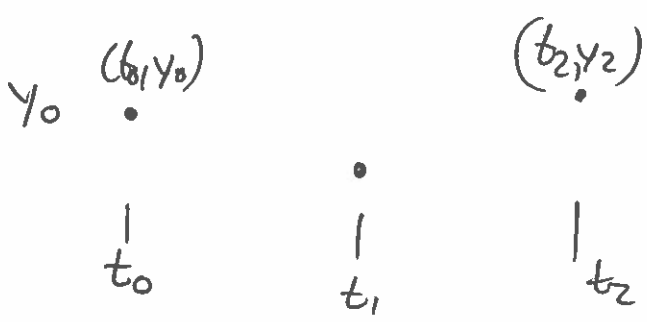


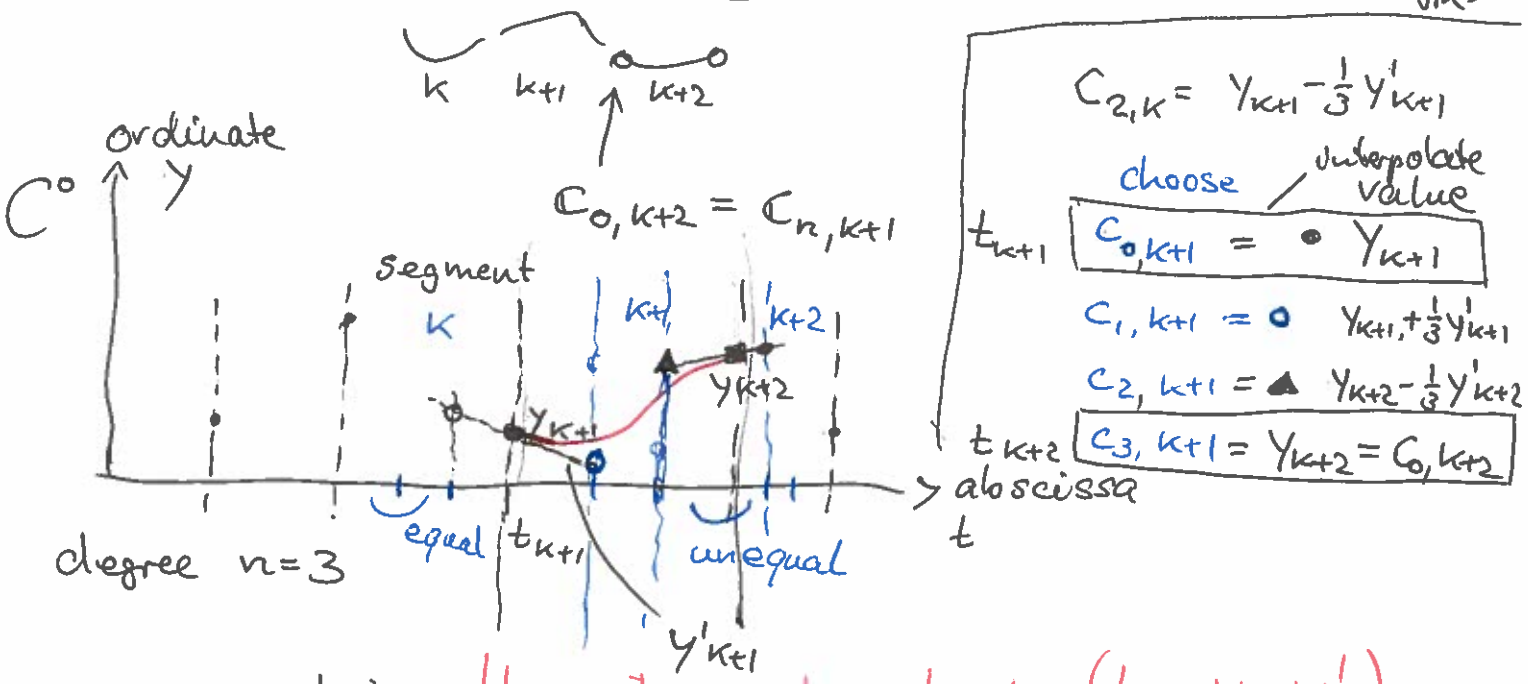
interpolant $\sum_{i=0}^{n} \text{coeff}_i \cdot \text{basis} f_{n,i}(t)$

Lagrange form — coefficient$_j$ y_j — $l_j(t)$

Newton form — $[t_0, t_1, \ldots t_j] f$ — $n_j(t)$

$f[\cdots] \sim [\ ] f$ $\qquad [t_j] f := y_j$

Bernstein-Bivard-Bézier form — $b_{j,n}(t)$



$C_{2,k} = y_{k+1} - \frac{1}{3} y'_{k+1}$

choose / interpolate value

t_{k+1} $\quad C_{0,k+1} = \bullet\ y_{k+1}$

$C_{1,k+1} = \circ\ y_{k+1} + \frac{1}{3} y'_{k+1}$

$C_{2,k+1} = \blacktriangle\ y_{k+2} - \frac{1}{3} y'_{k+2}$

t_{k+2} $\quad C_{3,k+1} = y_{k+2} = C_{0,k+2}$

cubic Hermite interpolant: (t_k, y_k, y'_k)

evaluate via nested multiplication (de Casteljau)

See wikipedia: Bezier Poly...